SYSTEMS PROGRAMMER SERIES

Code No.	Class Title	Occ. Area	Work Area	Prob. Period	Effective Date
3150	Systems Programmer I	02	736	6 mo.	08/13/02
3151	Systems Programmer II	02	736	6 mo.	08/13/02
3152	Systems Programmer III	02	736	6 mo.	08/13/02

Promotional Line: 232

Series Narrative

Positions in this series are responsible for programming, monitoring, evaluating, testing, implementing, documenting, and updating of the systems software that support and/or control the internal operating processes of enterprise wide, multi-user, computer systems. The systems software is designed to ensure the flexible, efficient, and reliable operation of the computer. Systems Programmers assist in the determination of how others may use the computer.

System software includes but is not limited to operating systems, online real-time systems, database and other file management software, performance evaluation tools, general utility software, system security software, and networking software. System software should be distinguished from application systems, information systems, scientific, and statistical software. These other types of software are primarily responsible for automating an institutions business processes such as payroll and accounting, for pure scientific and research purposes, and software developed to analyze data in the previous mentioned categories. Systems software controls the computer resources so that these other categories of software can function properly.

Systems Programmers typically--

--provide and support operating system software by determining the need for new software, evaluating alternatives, and developing or acquiring suitable programs; testing, debugging, and implementing these programs; and maintaining documentation for them

--prescribe how other computer professionals may use the computer system by specifying the technical standards and conventions; providing essential information to users and computing professionals; consulting with users and computing professionals on technical problems; and coordinating work with other areas in a technology department

--adjust operating system performance by monitoring, measuring, recording, and reporting the utilization and efficiency of the system; and assist with predicting the "life" of the system; and

--troubleshoot, diagnose, and remedy system software failures in concert with established software and hardware vendors.

DESCRIPTIONS OF LEVELS OF WORK

Level I: Systems Programmer I   3150

Employees at this level work under direct supervision and are responsible for programming testing, configuring, updating, documenting and/or otherwise supporting systems software.

A Systems Programmer I typically--

1.   programs, installs, customizes, tests, documents, and maintains systems software

2.   investigates and remedies systems software problems and failures

3.   participates in general systems software support activities

4.   interfaces with computing professionals, users and vendors to resolve problems

5.   performs other related duties as assigned

Level II: Systems Programmer II   3151

Employees at this level work under general supervision and are responsible for programming, testing, configuring, updating, documenting, monitoring, evaluating, and/or supporting systems software.

A Systems Programmer II typically--

1.   programs, installs, customizes, documents, monitors, evaluates, and maintains systems software

2.   develops systems software from prescribed specifications, i.e., defines, programs, tests, debugs, and installs components and subcomponents of operating and support systems

3.   troubleshoots, diagnoses, and remedies system software problems and failures

4.   configures mechanisms for measuring and measures system performance and efficiency for capacity planning

5.   recommends system software improvements

6.   monitors and maintains software licensing and maintenance agreements

7.   interfaces with computing professionals, users and vendors to resolve problems

8.   serves as technical consultant to computing professional, users and departmental management

9.   performs other related duties as assigned

Level III: Systems Programmer III   3152

Employees at this level are experienced systems programmers with the ability to support and/or program system software in more than one major component; they have knowledge of most all types of system

software, regardless of the complexity of the software. They may supervise other employees within the unit. They work under administrative direction.

A Systems Programmer III typically--

1. develops specifications for the most complex and comprehensive system software

2. directs the installation of system software components, and participates in related programming, testing, debugging, and installation activities as needed

3. prescribes techniques for the measurement of system performance, i.e., hardware and software monitors, and device utilization analysis; directs their installation and usage, and helps interpret measurement results

4. participates in overall system planning and recommends courses of action; may make independent decisions on subordinate technical matters

5. prescribes and publishes technical information to aid and inform persons using the computer and to optimize system efficiency and utilization

6. plans, assigns, supervises, and coordinates the activities of the system programming staff

7. provides troubleshooting support for problems not able to be resolved by other computing professionals

8. interfaces with users, computing professionals, and vendors to resolve problems

9. trains other systems programmers and computing professionals

10. performs other related duties as assigned

MINIMUM ACCEPTABLE QUALIFICATIONS REQUIRED FOR ENTRY INTO:

Level I: Systems Programmer I   3150

CREDENTIALS TO BE VERIFIED BY PLACEMENT OFFICER

1.   High school graduation or equivalent

2.   (A) 90 semester hours, 15 of which are in a field related to computer science, information systems, management sciences or a related field

or

(B) Any combination of education and experience totaling three years and consisting of no less than one year of experience in systems software and systems analyst work

PERSONAL ATTRIBUTES NEEDED TO UNDERTAKE JOB

1. Ability to think and reason critically

2. Ability to understand, develop, communicate and express ideas

3. Aptitude for programming

4. Knowledge of system software, computer hardware and uses of these to solve computing problems

Level II: Systems Programmer II   3151

CREDENTIALS TO BE VERIFIED BY PLACEMENT OFFICER

1. High school graduation or equivalent

2. (A) Bachelor's degree with a major in computer science, information systems, or a major in a closely related field that included 30 semester hours of credit in computer-related courses

or

(B) Four years of experience in computer programming, analysis, or systems software development/design that included one year of systems programming

or

(C) Any combination of education and experience that totals four years and included one year of experience and/or training in systems programming[1]

NOTE: Master's degree in computer science, computer programming, information systems, or information management sciences satisfies the requirement for #2 above.

PERSONAL ATTRIBUTES NEEDED TO UNDERTAKE JOB

1. Ability to think and reason critically

2. Ability to understand, develop, communicate and express ideas

3. Aptitude for programming

4. Knowledge of system software, computer hardware and uses of these to solve computing problems

5. Ability to act independently

Level III: Systems Programmer III   3152

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[1] Credit for course work in systems software development/design or closely related subjects shall be evaluated on the basis of one semester hour of credit being equal to one month of experience.

CREDENTIALS TO BE VERIFIED BY PLACEMENT OFFICER

1.   High school graduation or equivalent

2.   (A) Master's degree in computer science, information systems, information management
      sciences or a related field

<center>or</center>

       (B) Three years of work experience comparable to that gained as an Systems Programmer II

PERSONAL ATTRIBUTES NEEDED TO UNDERTAKE JOB

1.   Ability to think and reason critically

2.   Ability to understand, develop, communicate, and express ideas in general and as related to
      system software and hardware

3.   Aptitude for programming, system software configuration and operation

4.   Ability to act independently

5.   Ability to effectively supervise technical projects from design to implementation

6.   Ability to effectively supervise information systems technical personnel

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Systems Programmer I .... Revised
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